

**REMARKS:**

**Status of the Claims**

Claims 1-50 were originally filed. In the September 18, 2007 Amendment, the Group I invention was elected, and claims 14-19, 28, 29, and 33-35 were canceled. In the July 2, 2008 Amendment, claims 1, 2, 38, and 39 were further canceled. The remaining claims 3, 4, 40, and 41 stand rejected in the April 29, 2010 Office Action. Upon entry of this Amendment, the same set of claims is pending.

**Claim Rejection Under 35 U.S.C. § 101**

Claims 3 and 4 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Examiner refers to the last line of page 2 in Applicants' specification and asserts that the mixture in claim 3 is a product of nature because the chemicals are naturally mixed up in *Piper longum* Linn at an amount of about 100% (See, Office Action, page 3).

In Applicants' specification, the last three lines of page 2, among which the last line is referred by the Examiner, read the following:

Furthermore, nothing in the prior art discloses such C<sub>10</sub> - C<sub>11</sub>-E2, E4-alkadienamide mixtures as extractable from the ground, dried fruit of the *Piper* species, *Piper longum* Linn or *Piper peepuloides* (See, Specification, page 2, lines 27-29).

The above disclosure clearly teaches that a C<sub>10</sub> or C<sub>11</sub>-E2,E4-alkadienamide mixture is extractable from certain *Piper* species including *Piper longum* Linn and *Piper peepuloides*. The useful level of such a mixture has also been disclosed (See, Specification, page 2, lines 24-26). However, there is no description in Applicants' specification that the chemicals are naturally mixed up in *Piper longum* Linn at an amount of about 100%. Thus, it is believed the Examiner erred in making this rejection.

For at least these reasons, Applicants respectfully request that this 35 U.S.C. § 101 rejection be withdrawn.

### **Claim Rejection Under 35 U.S.C. § 102**

1. Claim 3 stands rejected under 35 U.S.C. § 102(b) as being anticipated by Hebert *et al.* (US 6451354 B1) (*See*, Office Action, page 3). Examiner alleges that Hebert *et al.* teach the pulverization of dried berries of *Piper longum* Linn, and the claimed alkadienamides inherently occur (*See*, Office Action, page 3).

A rejection under 35 U.S.C. 102/103 can only be made when the prior art product seems to be identical except that the prior art is silent as to an inherent characteristic (*See*, MPEP §2112, section III). Further, the fact that a certain result or characteristic may occur or be present in the prior art is not sufficient to establish the inherency of that result or characteristic. *In re Rijckaert*, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993) (reversed rejection because inherency was based on what would result due to optimization of conditions, not what was necessarily present in the prior art) (*See*, MPEP §2112, section IV).

Here, the Hebert mixture contains various constituents and is clearly distinct from that of the claimed invention, which consists essentially of four specific compounds (*See*, Hebert *et al.*, col. 4, line 46 to col. 5, line 12). Further, a disclosure of the pulverized mass of dried berries of *Piper longum* Linn is not a disclosure of a mixture of four specific alkadienamides. It is submitted the pulverization of dried berries of *Piper longum* Linn will not necessarily result in the claimed mixture. Accordingly, this 102 rejection based on inherency is believed to be improper.

2. Claims 3 and 4 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Yang *et al.* (J Agric Food Chem, 2002, 50: 3765-3767) (*See*, Office Action, page 3). Examiner alleges that Yang *et al.* teach the extraction of dried fruit of *P. longum* with methanol followed by partitioning into hexane, and the claimed alkadienamides would inherently be present (*See*, Office Action, page 4).

Yang *et al.* disclose the extraction of a mosquito larvicide, pipernonaline, from *P. longum*. Thus, the pipernonaline composition of Yang is clearly distinct from that of the claimed invention, which consists essentially of four specific alkadienamides.

Yang *et al.* also describe other previously identified constituents of *P. longum* such as piperine, piperlongumine, and piperettine. Thus, it would be apparent to one skilled in the art the Yang teaching is limited to the novel isolation of pipernonaline, and such a specific teaching should not be construed as an achievement of other constituents from *P. longum*.

Accordingly, this 102 rejection based on inherency is also believed to be improper.

3. Claims 3 and 40 stand rejected under 35 U.S.C. § 102(b) as being anticipated by JB Chem Pharm (RU 2157226 C2) with (<http://chemicalland21.com/lifescience/foco/dl-MENTHOL.html>). Examiner alleges that JB Chem Pharm teaches medicinal plants including *Piper longum* that are useful in anti-coughing preparation. Examiner further states menthol imparts tingling sensation (<http://chemicalland21.com/lifescience/foco/dl-MENTHOL.html>) (See, Office Action, page 4). Examiner concludes that the chemicals inherently occur (See, Office Action, page 4).

For the same reasons set forth above in connection with the Hebert reference, it is respectfully submitted that the composition in JB Chem Pharm is clearly distinct from that of the claimed invention, and a disclosure of *Piper longum* as a medically useful plant is distinct from the claimed invention that is precisely drawn to a mixture consisting essentially of four specific alkadienamides.

In addition, menthol is distinct from any of the claimed alkadienamides.

Accordingly, this 102 rejection based on inherency is further believed to be improper.

For at least these reasons, Applicants respectfully request that these 35 U.S.C. § 102 rejections be withdrawn.

**Claim Rejection Under 35 U.S.C. § 103**

Claims 3, 4, 40, and 41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Farooqi *et al.* (US 6264926 B1) and as evidenced by Rai (2004, *Mycoses*, 47: 479-481) (*See*, Office Action, page 5).

Examiner sets forth the same reasons as those in the above 35 U.S.C. § 102 rejections, which include that the claimed chemicals inherently occur in *Piper longum*'s fruit powder, which is employed for tooth care as taught by Farooqi *et al.* *Spilanthes calva* intrinsically contains spilanthol as evidenced in Rai is also used in tooth care (*See*, Office Action, page 5).

In response, Applicants submit the same arguments as above that the composition in Farooqi *et al.* is clearly distinct from that of the claimed invention, and a disclosure of the tooth care use of *Piper longum* fruit in the form of powder is distinct from the claimed invention that is precisely drawn to a mixture consisting essentially of four specific alkadienamides.

Accordingly, this 103 rejection based on inherency is believed to be improper.

Accordingly, Applicants respectfully submit that the claimed invention is patentable over Farooqi *et al.* in further evidence by Rai. For at least these reasons, Applicants respectfully request that the 35 U.S.C. § 103 rejection be withdrawn.

## CONCLUSION:

In view of the foregoing, Applicants respectfully request reconsideration, withdrawal of rejections, and allowance of all claims now present in the application.

The Commissioner is authorized to charge any required fees, including any extension and/or excess claim fees, any additional fees, or credit any overpayment to International Flavors & Fragrances Inc. Deposit Account No. 12-1295.

Respectfully submitted,

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Date: August 24, 2010

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